## IN THE CLAIMS:

1. (Currently amended) A method of isolating faulty links in a loop in a network, comprising:

testing a link between a last device and an initiator in the loop;

testing the loop between the initiator and the last device; and

if a faulty link is identified between the initiator and the last device, ~~identifying a faulty loop segment and isolating the faulty link within the faulty loop segment~~ performing divide and conquer tests to identify a faulty loop segment and isolate the faulty link.

2. (Original) The method of claim 1, further comprising, repeating said testing the loop between the initiator and the last device, and said identifying the faulty loop segment, and said isolating the faulty link within the faulty loop segment until said testing the loop between the initiator and the last devices passes.

3. (Original) The method of claim 1, further comprising identifying a faulty device.

4. (Original) The method of claim 1, wherein said testing the link between the last device and the initiator in the loop comprises performing a SCSI write buffer command and one or more SCSI read buffer commands.

5. (Original) The method of claim 1, wherein said testing the loop between the initiator and the last devices comprises performing one or more SCSI write buffer commands.

6. (Currently amended) A method of testing links in a network loop, comprising:

writing a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times;

determining whether a link between the last device and an initiator in the loop is a faulty link;

writing one or more test patterns to the last device one or more times;

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performing divide and conquer tests to determine ~~determining~~ whether a loop segment between the initiator and the last device includes at least one faulty link.

7.      (Original) The method of claim 6, further comprising isolating the at least one faulty link in the loop segment.

8.      (Original) The method of claim 7, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

writing one or more test patterns to the first test device one or more times;

if a write error is detected, isolating a faulty link in a loop segment between the initiator and the first test device; and

if a write error is not detected, isolating a faulty link a loop segment between the first test device and the last device.

9.      (Original) The method of claim 8, wherein said isolating the faulty link in the loop segment between the initiator and the first test device comprises:

a.      selecting a new test device, the new test device located between the initiator and the previous test device;

b.      writing one or more test patterns to the new test device one or more times;

c.      if a write error is detected, selecting a new test device between the initiator and the previous test device;

d.      repeating b and c until a write error is not detected;

e.      if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

f.      writing one or more test patterns to the new test device one or more times; and

g.      repeating e and f until a write error is detected.

10.     (Original) The method of claim 8, wherein said isolating the faulty link in the segment between the first test device and the last device comprises:

h.     selecting a new test device, the new test device located in a loop segment between the previous test device and the last device;

i.     writing one or more test patterns to the new test device one or more times;

j.     if a write error is not detected, selecting a new test device between the previous test device and the last device;

k.     repeating b and c until a write error is detected;

l.     if a write error is detected, selecting a new test device by decrementing the previous test device by one;

m.     writing one or more test patterns to the new test device one or more times; and

n.     repeating l and m until a write error is not detected.


11.     (Original) The method of claim 8, wherein said isolating the faulty link in the loop segment between the initiator and the first test device comprises:

a.     selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b.     writing one or more test patterns to the new test device one or more times;

c.     if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of the initiator and a prior previous test device;

d.     if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e.     repeating b, c, and d until there are less than three devices in the loop segment being tested;

f.     if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g.     if a write error is not detected, rounding up one from the new test device to identify the faulty link.


12.     (Original) The method of claim 8, wherein said isolating the faulty link in the loop segment between the first test device and the last device comprises:

h.      selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

i.      writing one or more test patterns to the new test device one or more times;

j.      if a write error is detected, selecting a new test device halfway down a loop segment between a prior previous test device and the previous test device;

k.      if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of the prior previous test device and the last device;

l.      repeating i, j, and k until there are less than three devices in the loop segment being tested.

m.      if a write error is detected, rounding down one from the new test device to identify the faulty link; and

n.      if a write error is not detected, rounding up one from the new test device to identify the faulty link.


13.    (Original) The method of claim 6, further comprising isolating a faulty device from the faulty link.


14.    (Original) The method of claim 10, wherein said writing one or more test patterns to the new test device one or more times comprises writing one or more SCSI write buffer commands to the new test device one or more times.


15.    (Original) The method of claim 12, wherein said writing one or more test patterns to the new test device one or more times comprises writing one or more SCSI write buffer commands to the new test device one or more times.


16.    (Original) A method of testing links in a network loop, comprising:

sending a SCSI write buffer command to a last device in the network loop;

sending one or more SCSI read buffer commands to the last device;

determining whether the link between the last device and an initiator in the network loop is a faulty link;

sending one or more SCSI write buffer commands to the last device;

performing divide and conquer tests to determine ~~determining~~ whether a loop

segment between the initiator and the last device includes at least one faulty link.

17.    (Original) The method of claim 16, further comprising isolating the at least one faulty link in the loop segment.

18.    (Original) The method of claim 17, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending one or more SCSI write buffer commands to the new test device;

if a write error is detected,

    a.    selecting a new test device, the new test device located between the initiator and the previous test device;

    b.    sending one or more SCSI write buffer commands to the new test device;

    c.    if a write error is detected, selecting a new test device between the initiator and the previous test device;

    d.    repeating b and c until a write error is not detected;

    e.    if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

    f.    sending one or more SCSI write buffer commands to the new test device; and

    g.    repeating e and f until a write error is detected;

if a write error is not detected,

    h.    selecting a new test device, the new test device located in a loop segment between the previous test device and the initiator;

    i.    sending one or more SCSI write buffer commands to the new test device;

j.      if a write error is not detected, selecting a new test device between the previous test device and the last device;

k.      repeating b and c until a write error is detected;

l.      if a write error is detected, selecting a new test device by decrementing the previous test device by one;

m.      sending one or more SCSI write buffer commands to the new test device; and

n.      repeating l and m until a write error is not detected.


19.      (Original) The method of claim 17, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending one or more SCSI write buffer commands to the new test device;

if a write error is detected,

a.      selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b.      sending one or more SCSI write buffer commands to the new test device; and

c.      if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of the initiator and a prior previous test device;

d.      if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e.      repeating b, c, and d until there are less than three devices in the loop segment being tested;

f.      if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g.      if a write error is not detected, rounding up one from the new test device to identify the faulty link;

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if a write error is not detected,

  h.  selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

  i.  sending one or more SCSI write buffer commands to the new test device; and

  j.  if a write error is detected, selecting a new test device halfway down a loop segment between the prior previous test device and the previous test device;

  k.  if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of a prior previous test device and the last device;

  l.  repeating i, j, and k until there are less than three devices in the loop segment being tested;

  m.  if a write error is detected, rounding down one from the new test device to identify the faulty link; and

  n.  if a write error is not detected, rounding up one from the new test device to identify the faulty link.

20.  (Original) The method of claim 16, further comprising isolating a faulty device from the faulty link.

21.  (Currently amended) A machine readable medium containing executable program instructions, which when executed on a digital processing system cause the digital processing system to perform a method comprising:

  writing a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times;

  determining whether a link between the last device and an initiator in the loop is a faulty link;

  writing one or more test patterns to the last device one or more times;

  performing divide and conquer tests to determine ~~determining~~ whether a loop segment between the initiator and the last device includes at least one faulty link.

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22.    (Original) The machine readable medium of claim 21, wherein said method further comprising isolating the at least one faulty link in the loop segment.

23.    (Original) The machine readable medium of claim 22, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

writing one or more test patterns to the first test device one or more times;

if a write error is detected, isolating a faulty link in a loop segment between the initiator and the first test device; and

if a write error is not detected, isolating a faulty link in a loop segment between the first test device and the last device.

24.    (Original) The machine readable medium of claim 23, wherein said isolating the faulty link in the loop segment between the initiator and the first test device comprises:

a.    selecting a new test device, the new test device located between the initiator and the previous test device;

b.    writing one or more test patterns to the new test device one or more times;

c.    if a write error is detected, selecting a new test device between the initiator and the previous test device;

d.    repeating b and c until a write error is not detected;

e.    if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

f.    writing one or more test patterns to the new test device one or more times; and

g.    repeating e and f until a write error is detected.

25.    (Original) The machine readable medium of claim 23, wherein said isolating the faulty link in the segment between the first test device and the last device comprises:

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h.      selecting a new test device, the new test device located in a loop segment between the previous test device and the last device;

i.      writing one or more test patterns to the new test device one or more times;

j.      if a write error is not detected, selecting a new test device between the previous test device and the last device;

k.      repeating b and c until a write error is detected;

l.      if a write error is detected, selecting a new test device by decrementing the previous test device by one;

m.      writing one or more test patterns to the new test device one or more times; and

n.      repeating l and m until a write error is not detected.


26.      (Original) The machine readable medium of claim 23, wherein said isolating the faulty link in the loop segment between the initiator and the first device comprises:

a.      selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b.      writing one or more test patterns to the new test device one or more times; and

c.      if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of the initiator and a prior previous test device;

d.      if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e.      repeating b, c, and d until there are less than three devices in the loop segment being tested;

f.      if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g.      if a write error is not detected, rounding up one from the new test device to identify the faulty link.

27. (Original) The machine readable medium of claim 23, wherein said isolating the faulty link in the loop segment between the first device and the last device comprises:

h. selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

i. writing one or more test patterns to the new test device one or more times; and

j. if a write error is detected, selecting a new test device halfway down a loop segment between a prior previous test device and the previous test device;

k. if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of the prior previous test device and the last device; and

l. repeating i, j, and k until there are less than three devices in the loop segment being tested.

m. if a write error is detected, rounding down one from the new test device to identify the faulty link; and

n. if a write error is not detected, rounding up one from the new test device to identify the faulty link.

28. (Currently amended) A machine readable medium containing executable program instructions, which when executed on a digital processing system cause the digital processing system to perform a method comprising:

sending a SCSI write buffer command to a last device in the network loop;

sending one or more SCSI read buffer commands to the last device;

determining whether the link between the last device and an initiator in the network loop is a faulty link;

sending one or more SCSI write buffer commands to the last device; and

performing divide and conquer tests to determine ~~determining~~ whether a loop segment between the initiator and the last device includes at least one faulty link.

29. (Original) The machine readable medium of claim 28, wherein said method further comprising isolating the at least one faulty link in the loop segment.

30.     (Currently amended) A system for isolating faulty links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices;

a processing unit;

code executed by the processing unit to perform operations, the operations comprising:

(i) testing via the interface a link between the last device and the initiator in the loop;

(ii) testing via the interface the loop between the initiator and the last device; and

(iii) if a faulty link is identified between the initiator and the last device, performing divide and conquer tests to identify ~~identifying~~ a faulty loop segment and isolating the faulty link within the faulty loop segment.


31.     (Previously presented) The system of claim 30, wherein the operations further comprise:

repeating said testing the loop between the initiator and the last device, and said identifying the faulty loop segment, and said isolating the faulty link within the faulty loop segment until said testing the loop between the initiator and the last devices passes.


32.     (Previously presented) The system of claim 30, wherein the operations further comprise:

identifying a faulty device.


33.     (Previously presented) The system of claim 30, wherein said testing the link between the last device and the initiator in the loop comprises performing via the interface a SCSI write buffer command and one or more SCSI read buffer commands.

34.     (Previously presented) The system of claim 30, wherein said testing the loop between the initiator and the last devices comprises performing one or more SCSI write buffer commands via the interface.

35.     (Currently amended)  A system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices;

a processing unit;

code executed by the processing unit to perform operations, the operations comprising: A method of testing links in a network loop, comprising:

(i) writing via the interface a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times;

(ii) determining whether a link between the last device and an initiator in the loop is a faulty link;

(iii) writing one or more test patterns via the interface to the last device one or more times; and

(iv) performing divide and conquer tests to determine determining whether a loop segment between the initiator and the last device includes at least one faulty link.

36.     (Previously presented) The system of claim 35, wherein the operations further comprise:

isolating the at least one faulty link in the loop segment.

37.     (Original) The system of claim 36, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

writing via the interface one or more test patterns to the first test device one or more times;

if a write error is detected, isolating a faulty link in a loop segment between the initiator and the first test device; and

if a write error is not detected, isolating a faulty link in a loop segment between the first test device and the last device.

38.     (Previously presented) The system of claim 37, wherein said isolating the faulty link in the loop segment between the initiator and the first test device comprises:

a.     selecting a new test device, the new test device located between the initiator and the previous test device;

b.     writing via the interface one or more test patterns to the new test device one or more times;

c.     if a write error is detected, selecting a new test device between the initiator and the previous test device;

d.     repeating b and c until a write error is not detected;

e.     if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

f.     writing via the interface one or more test patterns to the new test device one or more times; and

g.     repeating e and f until a write error is detected.

39.     (Previously presented) The system of claim 37, wherein said isolating the faulty link in the segment between the first test device and the last device comprises:

h.     selecting a new test device, the new test device located in a loop segment between the previous test device and the last device;

i.     writing via the interface one or more test patterns to the new test device one or more times;

j.     if a write error is not detected, selecting a new test device between the previous test device and the last device;

k.     repeating b and c until a write error is detected;

l.     if a write error is detected, selecting a new test device by decrementing the previous test device by one;

m. writing one or more test patterns to the new test device one or more times; and

n. repeating l and m until a write error is not detected.

40. (Previously presented) The system of claim 37, wherein said isolating the faulty link in the loop segment between the initiator and the first test device comprises:

a. selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b. writing via the interface one or more test patterns to the new test device one or more times;

c. if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of the initiator and a prior previous test device;

d. if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e. repeating b, c, and d until there are less than three devices in the loop segment being tested;

f. if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g. if a write error is not detected, rounding up one from the new test device to identify the faulty link.

41. (Previously presented) The system of claim 37, wherein said isolating the faulty link in the loop segment between the first test device and the last device comprises:

h. selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

i. writing via the interface one or more test patterns to the new test device one or more times;

j. if a write error is detected, selecting a new test device halfway down a loop segment between a prior previous test device and the previous test device;

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k.     if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of the prior previous test device and the last device;

l.     repeating i, j, and k until there are less than three devices in the loop segment being tested.

m.     if a write error is detected, rounding down one from the new test device to identify the faulty link; and

n.     if a write error is not detected, rounding up one from the new test device to identify the faulty link.


42.     (Previously presented) The system of claim 35, wherein the operations further comprise:

isolating a faulty device from the faulty link.


43.     (Previously presented) The system of claim 39, wherein said writing one or more test patterns to the new test device one or more times comprises writing one or more SCSI write buffer commands to the new test device one or more times.


44.     (Previously presented) The system of claim 41, wherein said writing one or more test patterns to the new test device one or more times comprises writing one or more SCSI write buffer commands to the new test device one or more times.


45.     (Currently amended) A system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices;

a processing unit;

code executed by the processing unit to perform operations, the operations comprising:

(i) sending a SCSI write buffer command via the interface to a last device in the network loop;

(ii) sending one or more SCSI read buffer commands via the interface to the last device;

(iii) determining whether the link between the last device and an initiator in the network loop is a faulty link;

(iv) sending one or more SCSI write buffer commands via the interface to the last device; and

(v) performing divide and conquer tests to determine ~~determining~~ whether a loop segment between the initiator and the last device includes at least one faulty link.

46.　(Previously presented) The system of claim 45, wherein the operations further comprise:

isolating the at least one faulty link in the loop segment.

47.　(Previously presented) The system of claim 46, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending via the interface one or more SCSI write buffer commands to the new test device;

if a write error is detected,

a.　selecting a new test device, the new test device located between the initiator and the previous test device;

b.　sending via the interface one or more SCSI write buffer commands to the new test device;

c.　if a write error is detected, selecting a new test device between the initiator and the previous test device;

d.　repeating b and c until a write error is not detected;

e.　if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

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f.      sending via the interface one or more SCSI write buffer commands to the new test device; and

g.      repeating e and f until a write error is detected;

if a write error is not detected,

h.      selecting a new test device, the new test device located in a loop segment between the previous test device and the initiator;

i.      sending via the interface one or more SCSI write buffer commands to the new test device;

j.      if a write error is not detected, selecting a new test device between the previous test device and the last device;

k.      repeating b and c until a write error is detected;

l.      if a write error is detected, selecting a new test device by decrementing the previous test device by one;

m.      sending via the interface one or more SCSI write buffer commands to the new test device; and

n.      repeating l and m until a write error is not detected.


48.      (Previously presented) The system of claim 46, wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending via the interface one or more SCSI write buffer commands to the new test device;

if a write error is detected,

a.      selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b.      sending via the interface one or more SCSI write buffer commands to the new test device; and

c.      if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of  the initiator and a prior previous test device;

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d.      if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e.      repeating b, c, and d until there are less than three devices in the loop segment being tested;

f.      if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g.      if a write error is not detected, rounding up one from the new test device to identify the faulty link;

if a write error is not detected,

h.      selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

i.      sending via the interface one or more SCSI write buffer commands to the new test device; and

j.      if a write error is detected, selecting a new test device halfway down a loop segment between the prior previous test device and the previous test device;

k.      if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of a prior previous test device and the last device;

l.      repeating i, j, and k until there are less than three devices in the loop segment being tested;

m.      if a write error is detected, rounding down one from the new test device to identify the faulty link; and

n.      if a write error is not detected, rounding up one from the new test device to identify the faulty link.


49.      (Previously presented) The system of claim 45, wherein the operations further comprise:

isolating a faulty device from the faulty link.

50. (New)     A method of testing links in a network loop, comprising:

writing a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times;

determining whether a link between the last device and an initiator in the loop is a faulty link;

writing one or more test patterns to the last device one or more times;

determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

isolating the at least one faulty link in the loop segment;

wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

writing one or more test patterns to the first test device one or more times;

if a write error is detected, isolating a faulty link in a loop segment between the initiator and the first test device; and

if a write error is not detected, isolating a faulty link in a loop segment between the first test device and the last device.

51. (New) A method of testing links in a network loop, comprising:

sending a SCSI write buffer command to a last device in the network loop;

sending one or more SCSI read buffer commands to the last device;

determining whether the link between the last device and an initiator in the network loop is a faulty link;

sending one or more SCSI write buffer commands to the last device;

determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

isolating the at least one faulty link in the loop segment;

wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending one or more SCSI write buffer commands to the new test device;

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if a write error is detected,

    a.       selecting a new test device, the new test device located between the initiator and the previous test device;

    b.       sending one or more SCSI write buffer commands to the new test device;

    c.       if a write error is detected, selecting a new test device between the initiator and the previous test device;

    d.       repeating b and c until a write error is not detected;

    e.       if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

    f.       sending one or more SCSI write buffer commands to the new test device; and

    g.       repeating e and f until a write error is detected;

if a write error is not detected,

    h.       selecting a new test device, the new test device located in a loop segment between the previous test device and the initiator;

    i.       sending one or more SCSI write buffer commands to the new test device;

    j.       if a write error is not detected, selecting a new test device between the previous test device and the last device;

    k.       repeating b and c until a write error is detected;

    l.       if a write error is detected, selecting a new test device by decrementing the previous test device by one;

    m.       sending one or more SCSI write buffer commands to the new test device; and

    n.       repeating l and m until a write error is not detected.


52.    (New) A method of testing links in a network loop, comprising:

sending a SCSI write buffer command to a last device in the network loop;

sending one or more SCSI read buffer commands to the last device;

determining whether the link between the last device and an initiator in the network loop is a faulty link;

sending one or more SCSI write buffer commands to the last device;

determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

isolating the at least one faulty link in the loop segment;
wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending one or more SCSI write buffer commands to the new test device;

if a write error is detected,

a.     selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b.     sending one or more SCSI write buffer commands to the new test device; and

c.     if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of the initiator and a prior previous test device;

d.     if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e.     repeating b, c, and d until there are less than three devices in the loop segment being tested;

f.     if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g.     if a write error is not detected, rounding up one from the new test device to identify the faulty link;

if a write error is not detected,

h.     selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

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i.  sending one or more SCSI write buffer commands to the new test device; and

j.  if a write error is detected, selecting a new test device halfway down a loop segment between the prior previous test device and the previous test device;

k.  if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of a prior previous test device and the last device;

l.  repeating i, j, and k until there are less than three devices in the loop segment being tested;

m.  if a write error is detected, rounding down one from the new test device to identify the faulty link; and

n.  if a write error is not detected, rounding up one from the new test device to identify the faulty link.

53. (New) A machine readable medium containing executable program instructions, which when executed on a digital processing system cause the digital processing system to perform a method comprising:

writing a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times;

determining whether a link between the last device and an initiator in the loop is a faulty link;

writing one or more test patterns to the last device one or more times;

determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

isolating the at least one faulty link in the loop segment;

wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

writing one or more test patterns to the first test device one or more times;

if a write error is detected, isolating a faulty link in a loop segment between the initiator and the first test device; and

if a write error is not detected, isolating a faulty link in a loop segment between the first test device and the last device.

54. (New) A system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices;

a processing unit;

code executed by the processing unit to perform operations, the operations comprising:

(i) writing via the interface a test pattern to a last device in the loop and reading the test pattern from the last device in the loop one or more times;

(ii) determining whether a link between the last device and an initiator in the loop is a faulty link;

(iii) writing one or more test patterns via the interface to the last device one or more times; and

(iv) determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

(v) isolating the at least one faulty link in the loop segment;

wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

writing via the interface one or more test patterns to the first test device one or more times;

if a write error is detected, isolating a faulty link in a loop segment between the initiator and the first test device; and

if a write error is not detected, isolating a faulty link in a loop segment between the first test device and the last device.

55. (New) A system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices;

a processing unit;

code executed by the processing unit to perform operations, the operations comprising:

(i) sending a SCSI write buffer command via the interface to a last device in the network loop;

(ii) sending one or more SCSI read buffer commands via the interface to the last device;

(iii) determining whether the link between the last device and an initiator in the network loop is a faulty link;

(iv) sending one or more SCSI write buffer commands via the interface to the last device;

(v) determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

(vi) isolating the at least one faulty link in the loop segment;

wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending via the interface one or more SCSI write buffer commands to the new test device;

if a write error is detected,

a.    selecting a new test device, the new test device located between the initiator and the previous test device;

b.    sending via the interface one or more SCSI write buffer commands to the new test device;

c.    if a write error is detected, selecting a new test device between the initiator and the previous test device;

d.    repeating b and c until a write error is not detected;

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e.  if a write error is not detected, selecting a new test device by incrementing the previous test device by one;

f.  sending via the interface one or more SCSI write buffer commands to the new test device; and

g.  repeating e and f until a write error is detected;

if a write error is not detected,

h.  selecting a new test device, the new test device located in a loop segment between the previous test device and the initiator;

i.  sending via the interface one or more SCSI write buffer commands to the new test device;

j.  if a write error is not detected, selecting a new test device between the previous test device and the last device;

k.  repeating b and c until a write error is detected;

l.  if a write error is detected, selecting a new test device by decrementing the previous test device by one;

m.  sending via the interface one or more SCSI write buffer commands to the new test device; and

n.  repeating l and m until a write error is not detected.

56. (New) A system for testing links in a loop of network devices, including a last device and an initiator, comprising:

an interface to communicate with the loop of network devices;

a processing unit;

code executed by the processing unit to perform operations, the operations comprising:

(i) sending a SCSI write buffer command via the interface to a last device in the network loop;

(ii) sending one or more SCSI read buffer commands via the interface to the last device;

(iii) determining whether the link between the last device and an initiator in the network loop is a faulty link;

(iv) sending one or more SCSI write buffer commands via the interface to the last device;

(v) determining whether a loop segment between the initiator and the last device includes at least one faulty link; and

(vi) isolating the at least one faulty link in the loop segment; wherein said isolating the at least one faulty link in the loop segment comprises:

selecting a first test device, the first test device located between the initiator and the last device in the loop;

sending via the interface one or more SCSI write buffer commands to the new test device;

if a write error is detected,

a.     selecting a new test device, the new test device located halfway down a loop segment between the initiator and the previous test device;

b.     sending via the interface one or more SCSI write buffer commands to the new test device; and

c.     if a write error is detected, selecting a new test device halfway down a loop segment between the previous test device and one of the initiator and a prior previous test device;

d.     if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and the prior previous test device;

e.     repeating b, c, and d until there are less than three devices in the loop segment being tested;

f.     if a write error is detected, rounding down one from the new test device to identify the faulty link; and

g.     if a write error is not detected, rounding up one from the new test device to identify the faulty link;

if a write error is not detected,

h.     selecting a new test device, the new test device located halfway up a loop segment between the previous test device and the last device;

i.      sending via the interface one or more SCSI write buffer commands to the new test device; and

j.      if a write error is detected, selecting a new test device halfway down a loop segment between the prior previous test device and the previous test device;

k.      if a write error is not detected, selecting a new test device halfway up a loop segment between the previous test device and one of a prior previous test device and the last device;

l.      repeating i, j, and k until there are less than three devices in the loop segment being tested;

m.      if a write error is detected, rounding down one from the new test device to identify the faulty link; and

n.      if a write error is not detected, rounding up one from the new test device to identify the faulty link.